

Cardinal Glass Industries, Inc. 44046.203  
DIALOG English-translation of JP Patent

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S8 2 PN=JP 3187039  
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DIALOG(R)File 351:Derwent WPI  
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008999660 \*\*Image available\*\*  
WPI Acc No: 1992-126940/199216  
XRPX Acc No: N92-094653

**Optical magnifying power rate compensator for facsimile printer -  
bends light flux direction change mirror to vary magnification of image  
focused on photoreceptive plane NoAbstract Dwg 1/6**

Patent Assignee: ASAHI OPTICAL CO LTD (ASAO )  
Number of Countries: 001 Number of Patents: 002  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 4068856	A	19920304	JP 90178947	A	19900705	199216 B
JP 3187039	B2	20010711	JP 90178947	A	19900705	200140

Priority Applications (No Type Date): JP 90178947 A 19900705

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
JP 4068856	A	4		
JP 3187039	B2	4	H04N-001/028	Previous Publ. patent JP 4068856

Title Terms: OPTICAL; MAGNIFY; POWER; RATE; COMPENSATE; FACSIMILE;  
PRINT; BEND; LIGHT; FLUX; DIRECTION; CHANGE; MIRROR; VARY; MAGNIFY;  
IMAGE; FOCUS; PHOTORECEIVER; PLANE; NOABSTRACT  
Derwent Class: P81; V07; W02  
International Patent Class (Main): H04N-001/028  
International Patent Class (Additional): G02B-007/19; G02B-007/198;  
G02B-017/00; H04N-001/02; H04N-001/04; H04N-001/19  
File Segment: EPI; EngPI  
Manual Codes (EPI/S-X): V07-K05; W02-J01A; W02-J02A1

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008780135 \*\*Image available\*\*  
WPI Acc No: 1991-284152/ 199139  
XRAM Acc No: C91-123031  
XRPX Acc No: N91-217328

**Opto-magnetic recording medium with improved recording density - has  
silicon carbide-nitride dielectric layer, magnetic layer and reflection  
layer**

Patent Assignee: SHINETSU CHEM IND CO LTD (SHIE )  
Number of Countries: 001 Number of Patents: 001  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 3187039	A	19910815	JP 89325208	A	19891215	199139 B

Priority Applications (No Type Date): JP 89325208 A 19891215

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Abstract (Basic): JP 3187039 A

Medium has, on transparent substrate (set on optical beam incidence side), (1) dielectric layer, (2) magnetic layer and (3) reflection layer, in which the dielectric layer is composed of SiC-SiN amorphous material.

ADVANTAGE - The dielectric layer has 1.70-2.30 refractive index, so that enhancing effect, Kerr effect, CN ratio and recording density are improved. In an example, SiC-SiN (30:70 mol ratio) amorphous dielectric layer was sputtered in a thickness of 0.2 microns on glass substrate in Ar gas atmosphere at  $4 \times 10^{-2}$  Torr with 800 W h.f. power. The layer had 2.12 refractive index and 90.1% transmittance. Tb-Fe magnetic layer (20 nm thick), amorphous SiC-SiN dielectric layer (20 nm) and Al reflection layer (40 nm) were successively sputtered on the 1st dielectric layer. The opto-magnetic recording medium had no coercivity deterioration even after standing at 85 deg.C, 85% RH for 500 hours.

(6pp Dwg.No.1/6)

Title Terms: OPTO; MAGNETIC; RECORD; MEDIUM; IMPROVE; RECORD; DENSITY; SILICON; CARBIDE; NITRIDE; DIELECTRIC; LAYER; MAGNETIC; LAYER; REFLECT; LAYER

Derwent Class: L03; T03; W04

International Patent Class (Additional): G11B-011/10

File Segment: CPI; EPI

Manual Codes (CPI/A-N): L03-B05F

Manual Codes (EPI/S-X): T03-D01; W04-D01A

Derwent Registry Numbers: 1247-U

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# Patent Abstracts of Japan

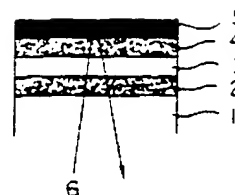
PUBLICATION NUMBER : 03187039  
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APPLICATION DATE : 15-12-89  
APPLICATION NUMBER : 01325208

APPLICANT : SHIN ETSU CHEM CO LTD;

INVENTOR : KASHIDA SHU;

INT.CL. : G11B 11/10

TITLE : MAGNETO-OPTICAL RECORDING  
MEDIUM



ABSTRACT : PURPOSE: To generate large enhancing effect, to increase Kerr rotation angle and to improve recording density by providing a dielectric film, magnetic film and reflecting film on a transparent substrate arranged at the incident side of light, and forming the dielectric layer with amorphous material composed of SiC and SiN.

CONSTITUTION: On a transparent substrate 1 such as glass and polycarbonate resin formed with guide grooves for tracking, dielectric film 2, magnetic film 3, dielectric film 4 composed of the same material as the film 2, and reflecting film 5 are successively formed to constitute the magneto-optical recording medium. Light 6 incident on the substrate 1 is made to reflect by the film 5. In this constitution, the amorphous material for the films 2, 4 has such a molar composition ratio of SiC:SiN = 20 - 80 : 80 - 20 with Si:N = 0.6 - 1.34 of SiN. The refractive index of the amorphous material is specified to 1.70 - 2.30, and the amorphous material is formed by sputtering in gaseous Ar atmosphere. Thereby, thermal diffusion of laser beam can be reduced to prevent expanding of recording bit diameter.

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